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Identification of acceptor substrate binding subsites+2 and+3 in the amylomaltase from *Thermus thermophilus* HB8

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Table S1. Sequences used for construction of Sequence Logos in Figure 3.

CGTase sequences

| Accession # | Organisms |
|--------------------|--|
| Q5Zeq7 | <i>Anaerobranca gottschalkii</i> |
| Q7X3T0 | <i>Bacillus agaradhaerens</i> |
| P30920 | <i>Bacillus circulans</i> |
| Q9F5W3 | <i>Bacillus circulans</i> |
| P43379 | <i>Bacillus circulans.</i> |
| Q8L3E0 | <i>Bacillus clarkii</i> |
| P14014 | <i>Bacillus licheniformis.</i> |
| P27036 | <i>Bacillus ohbensis.</i> |
| Q59239 | <i>Bacillus sp.</i> |
| O82984 | <i>Bacillus sp.</i> |
| Q5U9V9 | <i>Bacillus sp.</i> G1-2004 |
| P05618 | <i>Bacillus sp.</i> Strain 1011 |
| P31746 | <i>Bacillus sp.</i> Strain 1-1 |
| P30921 | <i>Bacillus sp.</i> Strain 17-1 |
| P09121 | <i>Bacillus sp.</i> Strain 38-2 |
| P31747 | <i>Bacillus sp.</i> Strain 6.6.3 |
| P17692 | <i>Bacillus sp.</i> Strain B1018 |
| Q5U9W0 | <i>Bacillus sp.</i> TS1-1 |
| P31797 | <i>Bacillus stearothermophilus</i> |
| Q9ZAQ0 | <i>Bacillus stearothermophilus</i> |
| O30565 | <i>Brevibacillus brevis</i> |
| P08704 | <i>Klebsiella oxytoca</i> |
| Q8RMG0 | <i>Nostoc sp.</i> Strain PCC 9229 |
| P31835 | <i>Paenibacillus macerans</i> |
| P04830 | <i>Paenibacillus macerans</i> |
| Q8X268 | <i>Pyrococcus kodakaraensis</i> |
| P26827 | <i>Thermoanaerobacter thermosulfuregenes</i> |
| Q9UWN2 | <i>Thermococcus sp.</i> B1001 |
| Q1VFW4 | <i>Vibrio alginolyticus</i> 12G01 |
| Q87FT5 | <i>Vibrio parahaemolyticus.</i> |

α -amylase sequences

| Accession # | Organism |
|--------------------|------------------------------------|
| P53354 | <i>Aedes aegypti</i> |
| P22630 | <i>Aeromonas hydrophila</i> |
| P00692 | <i>Bacillus amyloliquefaciens</i> |
| P08137 | <i>Bacillus circulans</i> |
| P06278 | <i>Bacillus licheniformis</i> |
| P20845 | <i>Bacillus megaterium</i> |
| P19571 | <i>Bacillus sp.</i> Strain 707 |
| P19531 | <i>Bacillus stearothermophilus</i> |
| P06279 | <i>Bacillus stearothermophilus</i> |

| | |
|--------|----------------------------------|
| P00691 | <i>Bacillus subtilis</i> |
| Q08806 | <i>Debaryomyces occidentalis</i> |
| P14899 | <i>Dictyoglomus thermophilum</i> |
| Q23835 | <i>Drosophila ananassae</i> |
| O18345 | <i>Drosophila ananassae</i> |
| Q23834 | <i>Drosophila ananassae</i> |
| Q9GQV3 | <i>Drosophila jambulina</i> |
| P81641 | <i>Drosophila melanogaster</i> |
| P08144 | <i>Drosophila melanogaster</i> |
| O18408 | <i>Drosophila melanogaster</i> |
| O18552 | <i>Drosophila pseudoobscura</i> |
| O18420 | <i>Drosophila subobscura</i> |
| Q9BN01 | <i>Drosophila yakuba</i> |
| O76264 | <i>Drosophila yakuba</i> |
| P19961 | <i>Homo sapiens</i> |
| P04746 | <i>Homo sapiens</i> |
| P04745 | <i>Homo sapiens</i> |
| P04747 | <i>Hordeum vulgare</i> |
| P00688 | <i>Mus musculus</i> |
| P00687 | <i>Mus musculus</i> |
| P27934 | <i>Oriza sativa</i> |
| P17654 | <i>Oryza sativa</i> |
| P27933 | <i>Oryza sativa</i> |
| P91778 | <i>Pecten maximus</i> |
| P22963 | <i>Pseudomonas saccharophila</i> |
| P13507 | <i>Pseudomonas stutzeri</i> |
| P00689 | <i>Rattus norvegicus</i> |
| P56634 | <i>Tenebrio molitor</i> |

Amylomaltase sequences

| Accession # | Organism |
|--------------------|--|
| BA000019 | <i>Anabaena</i> sp. (strain 7120) |
| AE000704 | <i>Aquifex aeolicus</i> VF5 |
| AC002409 | <i>Arabidopsis thaliana</i> |
| AY037231 | <i>Arabidopsis thaliana</i> |
| NCC2705 | <i>Bifidobacterium longum</i> |
| AE014792 | <i>Bifidobacterium longum</i> |
| AE014673 | <i>Bifidobacterium longum</i> NCC2705 |
| AE001127, | <i>Borrelia burgdorferi</i> |
| AE002303 | <i>Chlamydia muridarum</i> |
| AE001283 | <i>Chlamydia trachomatis</i> D/UW-3/CX |
| AF307842 | <i>Chlamydomonas reinhardtii</i> |
| AE016995 | <i>Chlamydophila caviae</i> GPIC |

| | |
|----------|---|
| AE017158 | <i>Chlamydophila pneumoniae</i> TW-183 |
| L37874 | <i>Clostridium butyricum</i> NCIMB 7423 |
| AP005221 | <i>Corynebacterium efficiens</i> YS-314 |
| AX065283 | <i>Corynebacterium glutamicum</i> |
| M32793 | <i>Escherichia coli</i> K12 |
| AE010594 | <i>Fusobacterium nucleatum</i> subsp. <i>nucleatum</i> ATCC 25586 |
| U32815 | <i>Haemophilus influenzae</i> Rd |
| AE006302 | <i>Lactococcus lactis</i> subsp. <i>lactis</i> IL1403 |
| AL022021 | <i>Mycobacterium tuberculosis</i> H37Rv |
| AP004009 | <i>Oryza sativa</i> |
| AE006089 | <i>Pasteurella multocida</i> PM70 |
| AE004643 | <i>Pseudomonas aeruginosa</i> PAO1 |
| AE009809 | <i>Pyrobaculum aerophilum</i> IM2 |
| AL646077 | <i>Ralstonia solanacearum</i> GMI1000 |
| AE016847 | <i>Salmonella enterica</i> subsp. <i>enterica</i> serovar Typhi Ty2 |
| AE015595 | <i>Shewanella oneidensis</i> MR-1 |
| X68664 | <i>Solanum tuberosum</i> |
| AE014257 | <i>Streptococcus agalactiae</i> 2603V/R |
| AE014987 | <i>Streptococcus mutans</i> UA159 |
| J01796 | <i>Streptococcus pneumoniae</i> TIGR4 |
| AE006568 | <i>Streptococcus pyogenes</i> M1 GAS SF370 |
| AE010052 | <i>Streptococcus pyogenes</i> MGAS8232 |
| AL138662 | <i>Streptomyces coelicolor</i> A3(2) |
| D90900 | <i>Synechocystis</i> sp. PCC 6803 |
| AP005371 | <i>Thermosynechococcus elongatus</i> BP-1 |
| AP008226 | <i>Thermus thermophilus</i> HB8 |
| AE004345 | <i>Vibrio cholerae</i> N16961 |
| AE011669 | <i>Xanthomonas axonopodis</i> pv. <i>citri</i> str. 306 |
| AE012138 | <i>Xanthomonas campestris</i> pv. <i>campestris</i> str. ATCC 33913 |
| AJ414141 | <i>Yersinia pestis</i> CO92 |